

**RESEARCH METHODOLOGY AND IPR
(ECEN 5103)**

Time Allotted : 3 hrs

Full Marks : 70

Figures out of the right margin indicate full marks.

*Candidates are required to answer Group A and
any 5 (five) from Group B to E, taking at least one from each group.*

Candidates are required to give answer in their own words as far as practicable.

**Group – A
(Multiple Choice Type Questions)**

1. Choose the correct alternative for the following: **10 × 1 = 10**
- (i) Research methodology is a way to systematically _____ the research problem.
(a) solve (b) hide (c) relate (d) discuss
- (ii) Possible motives for doing research can be of
(a) 2 types (b) 5 types
(c) 8 types (d) none of these.
- (iii) A government authority conferring a right for a set period, the sole right to exclude others from making, using or selling an invention is a _____.
(a) Copyright (b) Owner
(c) Patent (d) Title
- (iv) _____ a form of intellectual property law, protects original works of authorship, including literary, dramatic, musical, and artistic works, such as poetry, novels, movies, songs, computer software, and architecture.
(a) Patent (b) Copyright
(c) Masking (d) Forcing
- (v) A good technical report must include the following
(a) summary of results (b) nature of study
(c) bibliography (d) all of these.
- (vi) A journal is likely to publish the papers with
(a) original and significant findings
(b) well organized and well-written
(c) concise and yet complete
(d) all of these qualities.

- (vii) Plagiarism is the appropriation of another person's
(a) ideas (b) processes
(c) results (d) any of these.
- (viii) The Ministry administering the IPRs is
(a) Commerce & Industry (b) Home
(c) Foreign affairs (d) none of these.
- (ix) Fabrication is
(a) manipulation of research materials (b) appropriation of other's idea
(c) making up data (d) any of these.
- (x) Scientific research is mainly based on
(a) theoretical exercise (b) empirical study
(c) interviews (d) either (a) or (b).

Group – B

2. (a) What are the objectives of a research? Explain them briefly. Mention a few motivations for a researcher.
(b) Compare the following:
(i) Analytical Vs. Fundamental research
(ii) Conceptual Vs. Empirical research. **6 + 6 = 12**
3. (a) What characterize an empirical research problem? How do you justify its significance?
(b) Evaluate the criteria and the characteristics of a good research problem using an example. **(3 + 3) + 6 = 12**

Group – C

4. (a) What is the necessity of defining a problem? Describe a few techniques employed to define a problem.
(b) Why is literature survey important while defining a problem? Mention a few points to be remembered during the survey. **6 + 6 = 12**
5. (a) What is research ethics? In light of current advances in biomedical research, explain why maintaining ethical standard in research is important?
(b) What is plagiarism? What is its effect in research? What precautions are taken to avoid plagiarism in research? **(3 + 3) + (2 + 2 + 2) = 12**

Group – D

6. (a) Define interpretation. Why is it necessary?
(b) Explain a few techniques applied during interpretation.
6 + 6 = 12
7. (a) What is the significance of report writing? State some standard report types.
(b) Give in details the parts of a technical report with brief descriptions.
6 + 6 = 12

Group – E

8. What is a patent? What rights does a patent owner have? How many types patents exists and how is the patent granted? What is the scope of patent protection? What are lifespan of patents?
(3 + 3 + 3 + 2 + 1) = 12
9. What is a copyright law? What is meant by the term of a copyright law? What is copyright infringement and what are its consequences?
(4 + 4 + 4) = 12